IN THE CLAIMS

Please amend the claims as follows. This claim set is to replace all prior versions.

1-40. (canceled)

41. (original) A recombinant nucleic acid, comprising:

(a) a response element; and

(b) a nucleic acid encoding FSHβ operatively associated with said response element.

42. (original) The recombinant nucleic acid of claim 41, wherein said FSHβ is selected from the group consisting of mouse, sheep, cow or pig FSHβ.

43. (original) The recombinant nucleic acid according to claim 41, further comprising:

(c) an FSHβ promoter;

(d) an FSHβ locus control region operatively associated with said FSHβ promoter; and

(e) a nucleic acid encoding a ligand-controllable receptor operatively associated with said FSHβ promoter,

wherein said receptor binds to said response element in the presence of said ligand when expressed in a host cell.

44. (original) The recombinant nucleic acid of claim 43, wherein:

said response element is a tet operator;

said ligand-controllable receptor is a tetracycline-controllable transactivator fusion protein; and

said ligand is tetracycline or an analog thereof.

45. (original) The recombinant nucleic acid of claim 43, wherein:

said response element is a progesterone receptor response element;

said ligand-controllable receptor is a progesterone-controllable transactivator protein; and

said ligand is progesterone or an analog thereof.

46. (original) The recombinant nucleic acid of claim 43, wherein:

said response element is an estrogen receptor response element;

said ligand-controllable receptor is an estrogen-controllable transactivator protein; and

said ligand is estrogen or an analog thereof.

47. (original) A host cell containing the recombinant nucleic acid of claim 43.

48. (original) A method of making a non-human transgenic animal, comprising the steps of:

(a) providing a recombinant nucleic acid according to claim 43;

(b) introducing said nucleic acid construct into a mammalian oocyte;

(c) implanting said oocyte in a pseudopregnant female host; and then

(d) raising said transgenic animal to viability from said oocyte in said host;

wherein said animal produces greater levels of FSHβ and greater numbers of gametes when administered said ligand than when not administered said ligand.

49. (original) The method according to claim 48, wherein said animal is selected from the group consisting of mice, sheep, cows and pigs.

50. (original) The method of claim 48, wherein said animal is a mouse and said host is a mouse.

51. (original) The method of claim 48, wherein said introducing step is carried out by microinjection.

52. (original) The method of claim 48, wherein said nucleic acid comprises linear nucleic acid.

53. (currently amended) A transgenic non-human animal, said animal comprising cells that contain:

(a) a response element;

(b) a nucleic acid encoding FSHβ operatively associated with said response element; [[.]]

(c) an FSHβ promoter;

(d) an FSHβ locus control region operatively associated with said FSHβ promoter; and

(e) a nucleic acid encoding a ligand-controllable receptor operatively associated with said FSHβ promoter, wherein said receptor binds to said response element in the presence of said ligand when expressed in a host cell;

and wherein said animal produces greater levels of FSHβ and greater numbers of gametes when administered said ligand than when not administered said ligand.

54. (currently amended) The animal of claim 53, wherein said animal is a selected from the group consisting of mice, pigs, cows and sheep ~~mouse~~.

55. (original) The animal of claim 53, wherein said animal is a mouse.

56. (currently amended) The animal ~~of acid~~ of claim 53, wherein:
said response element is a tet operator;
said ligand-controllable receptor is a tetracycline-controllable transactivator fusion protein; and
said ligand is tetracycline or an analog thereof.

57. (currently amended) A method of enhancing the production of gametes in a transgenic non-human animal, comprising the steps of:

(a) providing a transgenic non-human animal, said animal comprising cells that contain:

(i) a response element;

(ii) a nucleic acid encoding FSHβ operatively associated with said response element; [[.]]

(iii) an FSHβ promoter;

(iv) an FSHβ locus control region operatively associated with said FSHβ promoter; and

(v) (v) a nucleic acid encoding a ligand-controllable receptor operatively associated with said FSHβ promoter, wherein said receptor binds to said response element in the presence of said ligand when expressed in a host cell;

(b) administering said ligand to said animal in an amount effective to (i) stimulate the production of FSHβ in said animal above that found in a corresponding untransformed animal; and (ii) stimulate the production of gametes in said animal to a level greater than that found in the corresponding untransformed animal.

58. (original) The method of claim 57, wherein said animal is a male, and said gametes are sperm.

59. (original) The method of claim 58, further comprising the step of harvesting said sperm from said animal.

60. (original) The method of claim 57, wherein said animal is a female, and said gametes are oocytes.

61. (original) The method of claim 60, further comprising the step of harvesting said oocytes from said animal.

62. (original) The method of claim 60, wherein said administering step is followed by the step of:

(c) mating said animal to produce a litter of offspring therefrom, the size of said litter being greater than the size of a litter produced by the corresponding untransformed animal.

63. (original) The method of claim 57, wherein said administering step is carried out by feeding said ligand to said animal.

64. (original) The method of claim 57, wherein said animal is selected from the group consisting of mice, pigs, sheep and cows.

65. (original) The method of claim 57, wherein said animal is a mouse.

66. (original) The method of claim 57, wherein:

said response element is a tet operator;

said ligand-controllable receptor is a tetracycline-controllable transactivator fusion protein; and

said ligand is tetracycline or an analog thereof.

67-70. (canceled)